

## **REMARKS**

Claims 1, 4-21 and 24-44 are now pending in the application. Claims 43 and 44 have been added to the present application. Applicant would like to thank the Examiner for the courtesies extended to Applicant's representative during a telephone interview on October 9, 2008. During the interview, Applicant's representative and the Examiner discussed the deficiencies of US Patent No.6,922,466 (Peterson), but the Examiner did not expressly indicate whether the claims as amended herein would define patentable subject matter over the prior art references Peterson in view of PGPUB 2002/0169609 (Kemp). The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

## **REJECTION UNDER 35 U.S.C. § 103**

Claims 1, 4, 6-21, 24 and 26-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Peterson et al. (U.S. Patent 6,922,466) in view of Kemp (U.S. Patent Publication 2002/0169609). This rejection is respectfully traversed.

Applicant believes that Independent Claims 1 and 21 are patentable over Peterson in view of Kemp. For example, neither Peterson nor Kemp teach the Speech Differentiation Module disclosed by Applicant. Nor do they teach the improved speech recognition module taught by Applicant. Notwithstanding, Independent Claims 1 and 21 have been amended to more clearly define the features of the claimed invention. For example, Claim 1 now discloses the speech differentiation module that differentiates "between the first speaker and the second speaker by associating speech received on the first channel with the first speaker and associating speech received on the second

channel with the second speaker.” Claim 1 now also clarifies that the speech recognition module uses recognized speech from the first speaker and the interactions of the first speaker and the second speaker to recognize a portion of the second speaker’s speech. In view of the Applicant’s clarifications, there are at least three features of Applicant’s invention that are not taught by the combination of Peterson and Kemp.

First, Peterson does not teach a speech differentiation module that differentiates between the first speaker and the second speaker by associating speech received on the first channel with the first speaker, and associating speech received on the second channel with the second speaker. More specifically, Peterson states “which speaker is the agent versus the caller can be determined using a speaker identifier. Algorithms for speaker identification are also in the public domain.” (column 20, lines 43-46). Peterson goes on to teach that “additional information, however, is necessary to identify agent versus caller. A database with speaker models from all agents in the call center can be used, or the agent can be inferred as the first speaker after a hold section.” (column 20, lines 46-51). Peterson then not only requires an undisclosed speaker identification algorithm, but additional information. Per Peterson, additional information such as speaker models or an inference of speaker based on the first speaker after a hold section is required to differentiate the speakers. The other method of differentiating between speakers taught by Peterson is by utilizing a human analyst. (column 22, lines 15-25). Peterson, therefore, does not teach differentiating speakers by associating each speaker with their respective channels.

Furthermore Kemp does not cure the deficiencies of Peterson. Kemp teaches a speaker identification method. Kemp does not contemplate two speakers conversing over a telephone system; rather Kemp contemplates a device and method for identifying a speaker using the speaker's speech and preexisting data relating to the speaker's speech. Thus, Kemp cannot be read to cure the deficiencies of Peterson.

Second, it is respectfully submitted that Peterson does not teach a speech recognition module improving automatic recognition of speech of the second speaker by recognizing the speech of a first speaker and recognizing the speech of the second speaker and partially basing the recognition of the second speaker's speech on the interaction between the speakers and using the first speaker as a reference speaker. Peterson does teach a "conversational-speech recognizer." (column 20, line 5). The conversational-speech recognizer taught in Peterson, however, merely outputs sequences of words for every speaker turn. (column 20, lines 9-10) The outputted sequence is analyzed by the topic detector and the name-entity detector. (column 20, lines 11-21). The topic detector and name-entity detector are trained with sets of calls to better determine what was uttered by the speaker. (column 20, line 57-column 21, line 10). Peterson, however, does not teach using the speech recognized from a first speaker to improve the recognition of the second speaker. This deficiency is significant because the speech recognition module improves the automatic recognition of speech of the second speaker. Peterson does not contemplate improving already recognized speech.

Furthermore, Kemp does not cure the deficiencies of Peterson. Kemp teaches a method for speaker identification using application speech. (page 1, paragraph 1). In

the event of unknown speech Kemp teaches the use of a generic model to identify the speech of a non-enrolled speaker. (page 3, paragraph 31). According to Kemp, a non-enrolled speaker is a speaker who does not have his or her voice prerecorded in a database available to the voice identification system. As discussed above, Kemp does not contemplate dialogue between two speakers. Kemp, therefore, cannot be read to teach using the speech of a first speaker and interaction between the first speaker and the second speaker to improve the recognition of the second speaker's speech. Thus neither Kemp nor Peterson teaches the claimed speech recognition module, and the combination of the references does not cure their individual deficiencies.

Third, it is respectfully submitted that Peterson does not teach "a transcript generation module generating a rich transcript based at least in part on recognized speech of the second speaker recognized by the speech recognition module." Peterson teaches annotation, but does not use the recognized speech of the second speaker to create annotations. Rather, Peterson teaches three ways for creating annotations. They are on-line monitoring, manually annotating recorded calls, and automatically annotating recorded calls. (column 8, lines 10-14). Further, it is respectfully submitted that annotations, as described in Peterson, are not interchangeable with transcripts. An annotation, as used in Peterson, is an assessment or information derived from the events of a call. Peterson teaches transcription, but does not teach transcription based at least in part on recognized speech of the second speaker.

Moreover, Kemp does not cure the deficiencies of Peterson. As discussed above, Kemp teaches a method for speaker identification. Kemp teaches the use of enrollment data, recorded by the speaker whose voice is to be recognized, to identify

the speaker. (page 1, paragraph 6). Kemp further teaches using application data, that is—speech of the speaker when the speaker is attempting to be identified—as additional training data. Kemp finally teaches using model data to identify unknown speakers. (page 3, paragraph 32). Thus, Kemp does not contemplate generating transcripts. Accordingly, neither Kemp nor Peterson teaches generating a rich transcript based in part on recognized speech of the second speaker.

It is respectfully submitted that Independent Claim 1 claims features that are not found in Peterson, Kemp or a combination thereof. Accordingly, Claim 1, and the claims depending therefrom, patentably distinguish over the cited references. It is noted that the subject matter taught in Independent Claim 21 is similar to the subject matter taught in Claim 1. Thus, Claim 21 and the claims depending therefrom also patentably distinguish over the cited references. Therefore, Applicant respectfully requests that the Examiner withdraw the rejection.

#### **REJECTION UNDER 35 U.S.C. § 103**

Claims 5 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Peterson in view of Kemp and in further view of Liu et al. (U.S. Patent Publication 2004/0204939). This rejection is respectfully traversed.

As discussed above, Independent Claims 1 and 21 have been amended to define patentable subject matter. Accordingly, the rejections of Claims 5 and 25 have become moot.

## **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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